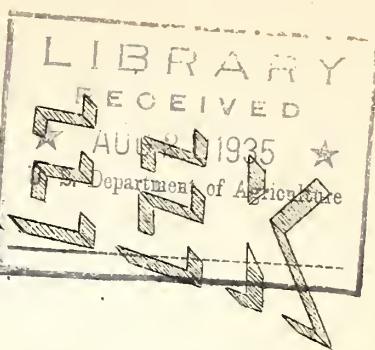


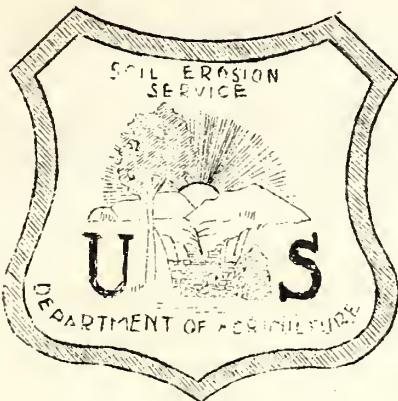
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FLYING CREEK



PROJECT 30



ROCK HILL, S.C.

FLYING CREEK

APRIL, 1935



KEEP THE GOOD LAND GOOD

FISHING CREEK NEWS

Dr. T. S. Buie, Regional Director, Spartanburg, S. C.
Mr. A. F. Ruff, Ass't Regional Director, Rock Hill, S. C.

LET'S GET ACQUAINTED

Here's a brand new publication: THE FISHING CREEK NEWS. It has a purpose for coming into existence. No one would have thought of such a thing last July. But what's wrong with having a FISHING CREEK NEWS for the people of Fishing Creek Area? There are things we want to know. Let this publication be our medium!

File each edition for future reference. It will be a MONTHLY publication.

Published by The Soil Erosion Service
U. S. Department of Agriculture
Rock Hill, South Carolina

Dear Cooperators:

Erosion control work is actually progressing very satisfactorily in the Fishing Creek Area. 248 farmers have signed invitations signifying their desire to cooperate with the Soil Erosion Service in a coordinated plan to keep the soil on their farms and to conserve the moisture needed, through a planned system of diversification of crops, rotation both within the field and in some instances of the field.

The soil experts, erosion specialists, agronomists, agricultural engineers, and foresters are all at your service.

In order that we may make a complete success of this project, it will require a lot of cooperation from the farmer and from the business man, who will be benefited in proportion to the benefits received by the farmer although indirectly.

It is to be hoped that no one phase of the work will be neglected by any cooperator or by the Soil Erosion Service. It is hoped that the fullest benefits may be seen and felt on every farm in the area and as quickly as is possible. It is also hoped that in your impatience to get something done on your farm, you will bear with us in the many problems confronting us.

For the members of our staff, I promise you the heartiest cooperation. Particularly to those who want us most and who will cooperate with us more readily do we promise a service unexcelled in our effort to thwart the greatest menace to our civilization -- EROSION.

We are possessed by the ambition that Fishing Creek Project may result in a much happier and more prosperous people and become an area for emulation to others.

A. F. Ruff
Ass't Regional Director

THE PROBLEM AND ITS REMEDY

When America was discovered, this hilly section of the country was covered largely with trees and an entanglement of roots and grasses which nature had provided to keep the soil in its place. But with the coming of civilized man, these trees were cut away and man is faced with a problem of restoration of timber and soil values.

Every year thousands of tons of soil, for which York County men paid hard earned money, passes off through the streams of the county. Farmers have eliminated some of this waste by terracing their sloping fields but in most instances their efforts have not been sufficient to hold the soil in place and preserve the land's fertility.

It is with the immediate view of aiding the farmer to preserve and build the usefulness of his land, and the ultimate end of safeguarding the nation's capital that the Government itself has taken a hand in the matter and brought the Soil Erosion Service to our county.

Experts in soils, in agricultural engineering, and in farm management are placed at the service of land owners in the Fishing Creek Area. Their services are free of any cost to any property owner and the Soil Erosion Service wants the farmers of this district to know what benefits have been made available to those living within the area.

LET'S LEAVE THE LAND BETTER THAN WE FOUND IT!

WHAT SOME OF THE NEWSPAPERS SAY ABOUT EROSION CONTROL

"Our present administration, through its Soil Erosion Service of the Department of the Interior, is trying to arouse people to realize that 'merely because our forefathers ruined millions of acres of good farm land is no reason why we should gold-brick our posterity by handing them a country they can't live on'."

THE STATE

"America has no greater problem affecting its natural resources than the annual loss from erosion. We have been inexcusably blind to these losses in the past, and the task of checking them is thus made more difficult. It will require the development of highly trained and intelligent leaders in every state. To this end the new employment-instruction system can prove of invaluable aid."

ATLANTA CONSTITUTION

"I am very much interested in this proposed soil erosion project recently launched and to take place in the Fishing Creek drainage area.---- To be sure I hope that every landowner and farmer in the Fishing Creek Soil Erosion Area will go into the proposition wholeheartedly, giving to the government men in charge every possible cooperation. No, I do not claim to be so smart or so wise, but for years I have been seeing that a change in our agricultural methods is imperative. There are some practices of some farmers that I have never been able to see any logic in. I know that almost any soil can be protected and improved by legume crops. I know that it is silly to plant three acres to get a bale of cotton, when it is practicable to build land up to produce a bale or more per acre. It is silly to plant corn on land that will produce 15 to 20 bushels, when it is possible to improve land to the point where it will grow 50 to 75 bushels.--- I want to see every farmer go into it and follow the 5-year-plan for its development and by the end of the time I expect to see some of the most profitable farming in York County that has ever been seen hereabouts."

YORKVILLE ENQUIRER

"Probably one of the most desirable phases of the government's New Deal program is the Soil Erosion Project. This federal endeavor is demonstrating to the people that owners of farm lands have been most prodigal in their appreciation of values and have allowed some of the richest rural sections to become impoverished through an indifference to soil protection."

EVENING HERALD (Rock Hill)

"FOR THE LAND'S SAKE" -- DO SOMETHING

Topsoil is made by decayed vegetation mixing with earth and contains the food necessary for the growth of the plant. In addition to supplying plant food, topsoil has the ability to take in and retain the moisture necessary to make the plant food available to the growing plant. Without sufficient moisture the plant cannot thrive and produce.

It is common knowledge that fresh land (newground) produces better crops than old land and especially is this apparent when drouth prevails during the critical poriod.

Land that is devoid of topsoil does not absorb the rain water in sufficient quantity to support a crop and the water that cannot be absorbed runs off the field carrying with it large quantities of soil which lodges in the streams or is deposited on bottom land rendering it less productive.

As a substitute for natural fertility it has been for a number of years the custom to use commercial fertilizers which supply some of the foods necessary for the crop but this can be employed successfully only in connection with such crops as require a small amount of moisture. The necessary water cannot be had in any but a natural way.

While it is true that commercial fertilizers have been used in most cases where the topsoil has been eroded to the vanishing point, the results of careful experimentation show that the greatest benefits from commercial fertilizers are obtained where it is used in connection with the best topsoils. In other words, the soils that have the most decayed vegetation give the best results either with or without commercial fertilizers.

If one takes note of the farms on which poor farming has been followed for a number of years, he will be impressed with the impoverished and eroded condition of the land. Every year thousands of acres are being abandoned because they can no longer be cultivated due to the badly eroded condition that prevails. Numerous gullies, which are constantly growing larger, make it impossible to utilize such land for crops. Thus these lands are lost, not only to the present owner but to generations yet unborn who have a right to the support which an all wise

Providence has provided. If these lands are planted with small grain in the Fall, they will not only be saved from the devastation of winter erosion but will yield an abundance of grain which will provide the necessary animal feed for the farm. Close growing cover crops are a vital necessity for rolling lands. They save the land and pay a handsome dividend in feed. We are not living for today only and it does not pay in the long run to buy feed with cotton money which is not income but rather an expenditure of capital through exportation of soil values.

The strongest urge in all creation is that of survival and reproduction and to make this possible Nature is constantly striving to make the earth fertile. She provides us with rain, sunshine and vegetation which when properly utilized blend into an harmonious whole making the landscape a thing of beauty and creating a pride of ownership that makes for the highest type of citizenship.

Poverty does not produce the best citizens and most assuredly impoverished and eroded lands result in poverty not only to those engaged directly in agricultural pursuits but to the community, state and nation. China suffers the loss of many thousands of lives annually as the result of floods and famine which in turn are the result of impoverished and eroded lands. Nature cannot prevent the violation of her laws but she unfailingly and without discrimination punishes the violators. "The sins of the father shall be visited upon the children even unto the third and fourth generation."

Nature has evolved plant life in such great variety that practically every climate and soil type is provided with such plants as are required to produce a balanced soil condition. Many centuries of undisturbed growth covered the lands with a topsoil which contained all that was required for the abundant production of the plants suitable to the various parts of the world.

Then came the devastating hand of man applying the torch and continuing to plant exhaustive crops year after year without any thought of returning to the soil any of the fertility of which it had been deprived. The steep hillsides were denuded of the trees which served to keep the soil fertile and from washing away. When a steep hillside was so badly eroded that it was no longer fit for use, it was abandoned and another just as steep was cleared and put through the same course of treatment. Land was plentiful so why take the trouble to care for it?

Despite the fact that virgin lands are almost a thing of the past, these destructive methods are still being practiced by a large percentage of farmers. On every side we see the grass and other vegetation being burned instead of being plowed under to compensate for the exhaustion that the land has suffered in producing the preceding crop. If we would only pause for a moment and reflect on the dire effect of this destructive practice, it would most certainly cease to be a menace to soil conservation. In burning grass, woods and stalks from the land we are deliberately violating one of nature's fundamental laws for which not only we but our children and our children's children will suffer. Not only are we guilty of these sins of commission but we have not carried on the plans provided by nature for the preservation of the soil. We have not practiced rotations that involve the growing of restorative crops which is imperative if we are to continue cultivating our lands.

It has taken many years to bring our farms to their present condition and it will require many more to rebuild them to a state of fertility that will preclude the probability of want and privation on the part of generations to come. It takes about fifty years of proper methods intensively applied to build one inch of topsoil. Is it not time to begin a work that is so vital to the welfare of ourselves and our country? Let's stop burning the vegetation that nature has put on our fields to aid us to make better crops and begin growing and plowing under the restorative crops that will steadily build up our soils to a point of productivity that will assure us of abundant yields and save the land for those who are to come after us. Terraces and commercial fertilizers never make fertile soil, they only help us to keep that which we have and make it give better returns. There is only one way to save our farms and that is by employing natures methods.

SIGNBOARDS

Large, white signs, six feet square, now mark the highways to locate for the traveler the Fishing Creek Erosion Project. Signs have been placed on wood lot management areas, and small signs have been secured to mark farms under contract with the Soil Erosion Service.

EDUCATIONAL

Farmers are profiting today on a high plateau of learning. The direct benefits of applied education are manifest.

Even more important than the intrinsic value of our erosion work in the area is the educational feature to farmers out of it. The correct building of terraces on slopes is vital and can be copied, and at this time are noted with much interest. In six months or a year the wonderful results (as already proven at other projects) from strip cropping shall be noted.

Recently a well-educated and very intelligent man was highly enthused over the work of the Soil Erosion Service. He said that he would not take hundreds of dollars for the airplane map, and that with this map, its different soils indicated, their best uses described, in conjunction with the results of soil test furnished by another department of the Government already in his hands, there was no excuse for a man farming like one in the dark.

If we can instill into each landowner an acute desire for a deep and rich top soil, and teach by use of terraces, strip and cover crops how to build it, we shall make of this Piedmont a bountiful land.

Farm operations should follow intelligent cropping practices adapted to the general characteristics of the land. The use of terraces is a necessary and fine means of erosion control, and on some sloping lands a systematic method of cropping serves the purpose admirably.

Some lands do not warrant the employment of the more expensive methods of control. The better method is a resort to thick-growing crops. When properly interspersed, these crops afford ample and economical protection from erosion.

Each farm demands special consideration and treatment in order to properly utilize clovers, grasses, small grains, lespedeza, vetch, cowpeas, and soy beans to the best advantage. These soil builders may be used so as to procure well-balanced farming operations in conformity with contour cultivation practices. Consider lespedeza for an illustration. It offers advantages: (1) it holds the soil down, (2) it is a soil improver, and (3) it possesses great value for income in pasture, hay and seed.

Experiments have proven that on an average slope lespedeza "permits the annual loss of about one-half a ton of soil an acre and only five to six per cent of the rainfall. Terraces, in comparison, allow the loss of five to seven tons of soil and twenty per cent of the rainfall."

SCIENCE HAS HELPED OTHER INDUSTRIES

LET IT HELP THE FARMER IMPROVE HIS METHODS

The procedure for controlling soil erosion which has been worked out on the various farms in the Demonstrational Erosion Control Project of the Fishing Creek Area is based on the survey of the soils and their condition in regard to slope, degree of erosion, soil type and culture.

Each of the farms in the area is to be, or has already been, mapped in regard to the conditions previously mentioned by the soil specialists located at Rock Hill.

The specialists take an airplane photograph of the farms under consideration and on this map indicate the different slopes, soil types, degrees of erosion, and cultural methods on each farm.

This is the beginning or basis of all work done by the Soil Erosion Service in the control project under consideration. We find the conditions to be quite variable with the different farms, therefore, it becomes necessary to give each farm special consideration from every standpoint, for each farm presents a different problem.

In the Fishing Creek Control Project, up to date, we have found 16 soil types. We find the different soils need different methods of control applied on them. One type of soil will grow one crop very good while a different type of soil in an adjoining field will not produce the same crop profitably. However, if it is planted to a suitable crop, it will be very productive.

It is the soil specialist's job to map each farm in the area and from this set of maps transfer all the information to another set to be used by the erosion specialist who goes out with the landowner and plans the crops for the different soils. The erosion specialist keeps in mind the information previously obtained by the soils men concerning the different farms and plans crops on the different fields which are best suited to the soils. The erosion specialist also keeps in mind the erosion which has already taken place on a particular field and recommends a crop which will hold future erosion down to a minimum.

Up to date the Soils Department has already made their survey on 216 farms or 27,424 acres which is a little over half of the total acreage in the Fishing Creek Area, the total acreage being about 51,000 acres.

DID YOU KNOW

That a Reconnaissance Survey of South Carolina shows that almost one-half of the land of the Piedmont is now abandoned or so badly eroded that profitable yields can no longer be made.

That less than 1% of forest fires in South Carolina are started by natural causes -- lightning. The rest are caused by man's carelessness and negligence.

That Bermuda is the only grass adapted to South Carolina that will grow on badly eroded soil of low fertility.

That 327 miles of terraces have been constructed in the South Tiger River Area in Greenville and Spartanburg counties.

That water gauges have been placed at intervals throughout the Fishing Creek Area to record rainfall.

That cotton contributes particularly to erosion. It is a clean cultivated crop occupying the land for such a large portion of the year.

That of the fertilizer the farmer puts in the ground, 1 part is used in plant consumption to 21 parts lost by erosion.

That black locusts grow well on poor and dry soils, is easily propagated, and produces very durable wood.

That the direct annual cost to the farmers of our nation due to erosion is at least \$400,000,000 annually, not to count the ultimate cost in value of destroyed land.

That no farm in the Fishing Creek Area is too large or too small to receive aid from the Soil Erosion Service.

That during the summer months the Forestry Department will be making growth studies, estimating timber on the area, checking for survival of last years plantings, and making planting plans for next year.

That it costs you dollars when your woods burn.

That pine trees should not be cut between April 15th and October 1st because of beetle infestation.

WATER CONTROL

Good farming requires control of water; otherwise, the soils are washed away. A continuation of profitable farming demands that the soil of the hillsides be kept there. The hillside may be terraced so that the water is let down gradually without erosion.

Terracing has been practiced in this section for a long time, but the kind of terraces built have been inadequate for the rainfall. The Soil Erosion Service is employing machinery to build adequate terraces.

Another correction being made is controlling the water where it empties from the terraces. Proper channel outlets stop the formation of ugly and destructive gullies.

Terraces and ditches must be made large enough to carry the volume of water. While large terraces and ditch banks take up space in the field, they may be made productive in crops.

RUNNING ROWS BETWEEN TERRACES

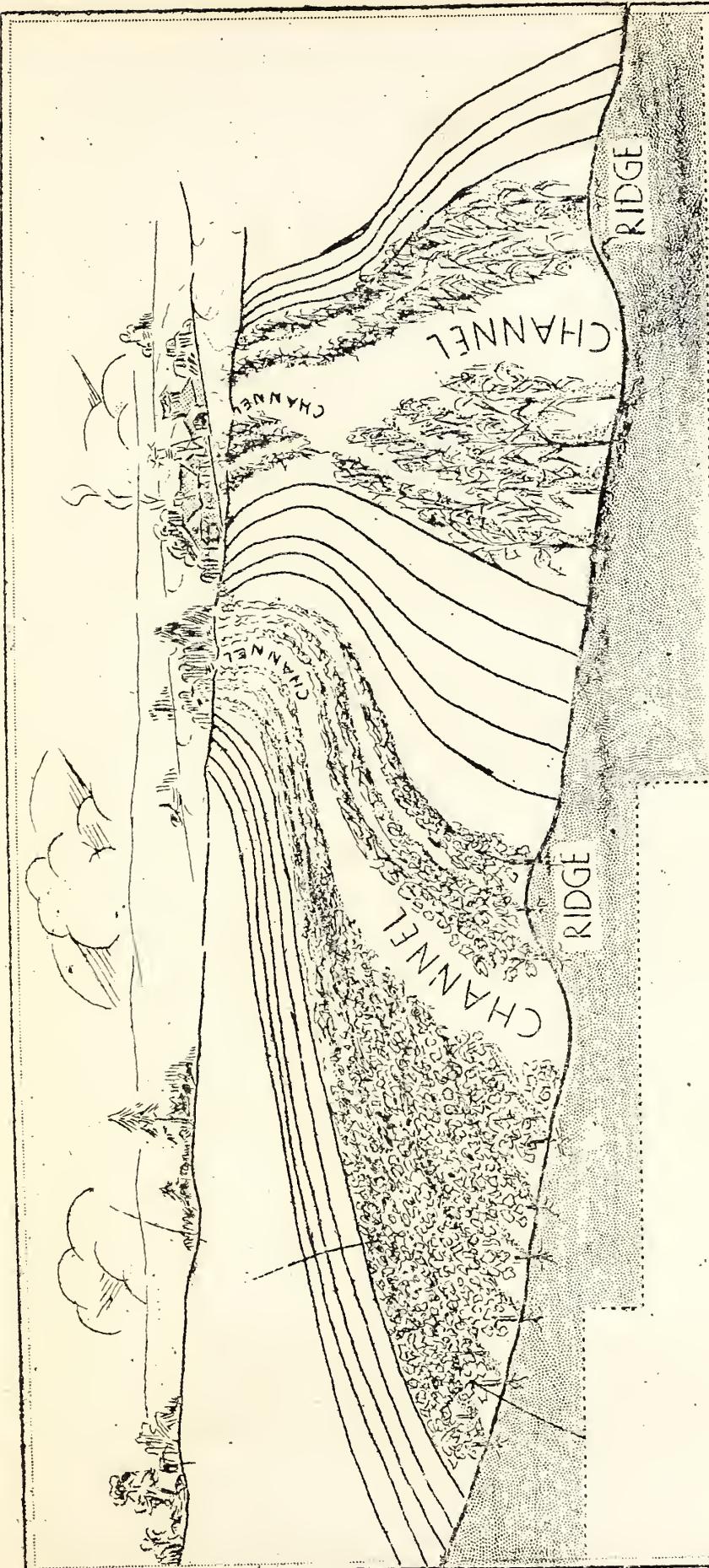
The Soil Erosion Service makes these suggestions to the farmer:

Start the rows with the upper terrace so that the short rows may end in the channel of the lower terrace.

In the bottom of the channel a 4 foot furrow should be kept open and free at the end of cultivating season from the obstruction of growing plants.

The custom of placing short rows in the middle between the terraces results in too much tramping of the crops in turning.

(Note illustration on opposite page)



ARRANGEMENT OF COTTON & CORN

ON TERRACE

ALSO SHORT ROW ARRANGEMENT

KEEP THE TRACTORS RUNNING

To advance our terracing program in the Fishing Creek Area it is necessary for the farmers to cooperate with us and keep the tractors running throughout the cropping season.

Keep The Tractors Running

It is to your advantage to have your land terraced as soon as possible. Not only from the erosion point of view but because your cropping plan can be put into effect much sooner. As we all know there will be a scarcity of land to be terraced this summer because of crops. By leaving out a field completely or by leaving a 10 foot strip along each side of the terrace line will mean earlier terracing for you. Without your cooperation we are helpless in keeping the machines running. If every cooperator will do his part there will be less hardship on any one cooperator.

Keep The Tractors Running

Let's all get together and plan some field for summer terracing. Please bear in mind that we must start at the top of a slope and work down. If you do leave us some land for summer terracing, be sure that it begins at the top of the slope.

Keep The Tractors Running

This past week we have started 3 crews running at night. It is our intention to start 3 more next week. By doing this we are able to accomplish twice as much. The only way that these tractors can run solid time this summer is by your cooperation.

Keep The Tractors Running

New terraces should not be cultivated the first year. Give them a close growing crop and make hay.

Keep The Tractors Running

GOOD NEWS: Mr. Dave Cameron, who resides in the area near York, reports this morning that he had 325 acres of freshly terraced land which held fine, without any breaks, after 2.18 inches rainfall. Six waterways were made on these farms. His lespezea is reported up to a fine stand.

CONTRACTS IN THE MAKING AND IN EXECUTION

Much progress is being made in the writing of cooperative agreements between the farmers of Fishing Creek Area and the Soil Erosion Service. Through Thursday, March 28 one hundred and fifty farms were under agreement. The total acreage in the farms under agreement is approximately 21,210. There are approximately fifty-one thousand acres in the Fishing Creek Soil Erosion Project; therefore, slightly more than 41 per cent of the acreage is under agreement.

The three contact men in the Farm Management department who are writing the cropping plans appreciate the cooperation they have received from the farmers. Without their cooperation as much progress could not have been made. It is estimated that there are 450 farms in the area so there is much work to be done. We hope you will bear with us if your agreement has not been written.

When the farmer receives his copy of the agreement from the office, we want him to study the cropping plans and the map and become thoroughly familiar with the plans so that they may be followed.

The writing of agreements is being discontinued for a short time while the contact men are going back to the farms that are already under agreement to check the plans and see that the plans are being carried out.

The entire staff of the Soil Erosion Service is available at all times to furnish assistance to cooperators in the area in advancing the complete program of erosion control.

The benefit derived from winter cover crops depends upon the amount of growth they make before being plowed under. It is very likely that in the rush to plant crops in the spring, many farmers will overlook this important fact. We urge farmers in this area not to be too hasty in plowing under their winter cover crops, but to let these crops make sufficient growth so as to get the best results in soil building.

ROTATIONS

Some probable crop rotations for the Fishing Creek Area as suggested by Mr. Carnes, Chief Erosion Specialist, are as follows:

1. THREE YEAR - Cotton, grain and corn
Winter cover crop to precede corn with or without lespedeza or grain.
2. THREE YEAR - Cotton, cotton, and grain
Winter cover crop to precede 1/2 cotton area.
3. THREE YEAR - Corn, corn, and grain
With or without lespedeza or grain.
4. TWO YEAR - Corn, and grain
Lespedeza or grain.
5. TWO YEAR - Grain and row crop (corn or cotton).

NOTE: Ten Fundamental Steps in Erosion Control:

1. crop rotation
2. strip cropping
3. contour farming
4. terracing
5. preventing fire and overgrazing
6. contour furrowing of pastures
7. planting of trees and grasses
8. planting winter cover crops
9. gully control
10. construction of farm reservoirs

PROGRESS IN FORESTRY

The Forestry Department of the Soil Erosion Service began work in the Fishing Creek Area January 1, 1935, and has planted 725,370 trees and made four wood lot thinnings.

The steep and badly eroded land on the cooperator's farm is turned over to us for planting. Pines are planted on the best sites and black locust on the worst areas.

Black locust is the best erosion control tree we plant. It will grow on very poor soil, has a large root system, and is leguminous, making it a good soil holder and builder.

The wood of black locust is hard and very durable, making it of great value for fence posts, insulator pins, wagon wheel hubs, etc.

Most of our plantings are loblolly pine. This pine does not grow in any large amount in this locality but it will grow well here when planted. It is a fast growing pine and produces wood of good quality in a comparatively short time.

In addition to black locust and loblolly pine a few thousand each of longleaf, shortleaf and slash pines have been planted.

Shortleaf is the native pine in this area.

Slash and longleaf pine do not grow naturally here, but will be valuable additions to the forests of this section. They are dual-purpose trees, being valuable both for wood products and turpentine.

Slash pine is the fastest growing of the Southern pines and has great possibilities as a pulp wood producer.

We also planted a few hardwoods including: ash, gum, black walnut, yellow poplar and sapium. All of these except sapium are native in the area. Sapium is an imported tree that is used in the soap industry.

During the planting season when the weather was too bad to plant, the crews were used to make demonstrational thinnings in some of the wood lots scattered over the area. These thinnings though small show what can be done to improve the farm woods. Mr. J. S. Sadler, who lives near Tirzah, after seeing our demonstrational plot near York, thinned a small area on his farm and is learning first hand how to care for his woods.

GAME SANCTUARIES IN THE FISHING CREEK AREA

The Soil Erosion Service cooperating with the State Game Commission has completed plans for establishing game sanctuaries in the Fishing Creek Area.

We have received cards from 100 cooperators stating that they were interested in placing their farms in sanctuaries. Within the next few weeks the landowners will be asked to sign the sanctuary agreements and then their land will be posted.

Under the State Sanctuary plan, the landowner signs an agreement with the State Game Commission to cooperate in preventing all hunting on his land for a period of five years.

Game conservation is tied in with Soil Erosion and land use programs because to get the most out of our land, we must have all factors balanced and game is one of these factors.

Most of the seed being distributed by the Soil Erosion Service is good quail food. By next year there will be enough seed dropped to bring many birds through the winter, and by having them protected will help speed the restocking of the Fishing Creek Area.

The Forestry Department of the Soil Erosion Service, cooperating with the Vocational Agriculture Departments of Rock Hill and York High Schools, is building small nursery plats at each school.

There will be three beds, 50' x 4', at each school. The Soil Erosion Service is building the beds and furnishing the seed. The schools will keep, plant, and maintain them. Next fall the seedlings raised will either be used on the school forest or by the students on their home farms.

SUMMARY OF ACTIVITIES OF FISHING CREEK AREA
TO MARCH 28

Terrace lines run - acres -----	4,361
Linear feet terrace lines run -----	1,870,683
Terraces constructed by SES - acres -----	1,295
Linear feet terraces constructed -----	587,972
Terraces constructed by Farmers - acres -----	240
Treated waterways -----	18
Asphalt outlets (experimental) -----	6
Baffles (timber) -----	604
Dams (masonry) -----	4
Terrace outlets (sodded) -----	36
Cubic yards sloping by hand -----	690
Cubic yards sloping by dynamite -----	927
Square yards sodding -----	2,990
Square yards seeding in waterways -----	14,720
Linear feet channel ditching by tractor-----	15,872
Trees and vines planted-----	865,703
Contracts signed -----	150
Tours -----	16
Soil and erosion survey completed on - acres--	29,147
New aerial sheets platted - farms -----	336
Invitations to work received from Farmers -----	249

NOTE: 25% of the terraces constructed was done during the past week which is the only week of continuous good weather we have had.

